GENERAL QUALITY ASSURANCE PROJECT PLAN
FOR
OVERSIGHT SPLIT SAMPLING
Version 0.0

For use with QAPP Addendum
for
Sites in EPA Region 7

Prepared By:
Mary Grisolano, AWMD/WRAP

March 2015

REGIONAL QUALITY ASSURANCE PROJECT PLAN APPROVAL

This General Quality Assurance Project Plan (QAPP) is only to be used in conjunction with a project specific QAPP Addendum for oversight split sampling at RCRA sites having an EPA-approved facility QAPP in place that describes field sampling procedures for the RCRA project. The General QAPP and QAPP Addendum have been prepared in accordance with the *EPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5, EPA/240/B-01/003, March 2001), for use by the U.S. Environmental Protection Agency (EPA), or its designated representatives.

Any other project not falling within the scope of this general QAPP requires the preparation of a separate, stand-alone field sampling plan and QAPP per R-5 and approved per Region 7's requirements.

I have reviewed the attached General QAPP for the collection of split samples at Region 7 sites and find that the procedures outlined in this document combined with an EPA-approved QAPP Addendum will result in data that meet the objectives for oversight split sample collection as outlined in the EPA-approved General QAPP and QAPP Addendum.

APPROVAL

Don Lininger
EPA R7/AWMD/WRAP Branch Chief

3/25/15
Date

Diane Harris
Diane Harris
EPA Regional QA Manager

03/25/2015
Date

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GENERAL QUALITY ASSURANCE PROJECT PLAN

PURPOSE: This General QAPP combined with a project-specific EPA-approved QAPP Addendum describe the information and procedures required to direct collection of split samples by EPA personnel or designees. A QAPP Addendum template is attached to this General QAPP that describes the information necessary to be included in the QAPP Addendum. This General QAPP stands approved by EPA ENST for use in conjunction with a QAPP Addendum that requires subsequent submittal to EPA ENST for review and approval. This General QAPP and Addendum template remain valid for use from the date of signature for a period of five years. No later than 5 years from approval by the RQAM it must be resubmitted for review and approval if it will continue to be used.

The General QAPP and QAPP Addenda have been developed with the assumption that an EPA-approved Facility-prepared Work Plan/QAPP exists that contains project-specific site background/history, field sampling procedures, and quality assurance/quality control procedures in their entirety. The General QAPP/QAPP Addendum together contain the procedures to allow for split sample collection and analysis by EPA's laboratory, but do not include complete field sampling procedures, such as monitoring well purging for groundwater samples or soil boring procedures for subsurface soil samples.

A3. DISTRIBUTION LIST

The individuals responsible for the activities identified in the QAPP are as follows:

EPA Project Manager (PM) (identified in the QAPP Addendum)
EPA Region 7 Quality Assurance Manager (RQAM)
Field Sampler (identified in the QAPP Addendum)

Copies of the General QAPP/QAPP Addendum and any further revisions will be distributed to the above-listed individuals by the PM. The PM will also ensure that copies of the General QAPP/QAPP Addendum and any further revisions are included in the EPA Region 7's Regional Records Center (RCC).

A4. PROJECT/TASK ORGANIZATION

The individuals directly responsible for the oversight split sampling and project management and their specific responsibilities are outlined below.

EPA Region 7 PM: The EPA PM has overall responsibility for project coordination and preparation of the QAPP Addendum and subsequent revisions considering project scope,

objectives, and facility-specific technical requirements. The PM ensures QAPP implementation and receives EPA and facility data for comparison and evaluation.

EPA Region 7 Quality Assurance Manager (RQAM): The RQAM will receive, review, and approve the EPA-developed General QAPP and individual QAPP Addenda and any further revisions of these documents. The RQAM will conduct an assessment of project activities as requested by the EPA PM.

EPA Region 7 Laboratory Director: Receive, analyze, and dispose of samples. Ensure the chain of custody of the samples is valid and continued. Report laboratory-validated data to EPA PM.

Field Sampler: The EPA PM or designee (identified in the QAPP Addendum) will prepare the analytical services request (ASR), and be responsible for overall coordination of field oversight activities, including collection of split samples.

A5. PROBLEM DEFINITION/BACKGROUND

The individual QAPP Addenda contain site specific information such as site location, sample locations and media, and analytical methods for the environmental field activities at the project site. Additional information, such as site background and history, are provided in the EPA-approved Facility-prepared Work Plan/QAPP, identified by Work Plan title/date and EPA QAPP approval number in the QAPP Addendum. Complete field procedures such as decontamination, field monitoring, monitoring well purging, and soil boring procedures are also provided in the EPA-approved Facility-prepared Work Plan/QAPP. The General QAPP and QAPP Addendum cover procedures associated only with split sampling, i.e., collection at the point of split collection, management, delivery and analysis.

A6. PROJECT/TASK DESCRIPTION

The EPA will periodically collect split samples as part of RCRA project oversight. Project-specific information are provided in the QAPP Addendum. The purpose of the General QAPP and QAPP Addendum is to outline the project approach and methods to be used during oversight split sampling activities at EPA Region 7 RCRA facilities. The resulting data will be used to evaluate the analytical data acquired from the facility during this synoptic sampling activity. The primary objective for oversight split sampling is to assess the accuracy and precision of facility generated analytical data based on the results of EPA split sample data.

A7. QUALITY OBJECTIVES AND CRITERIA FOR MEASUREMENT DATA

The R7ENST Laboratory or its contractors will analyze all split samples. The EPA PM will confirm that the achievable detection limits associated with the analytical methods specified for this project will provide adequate sensitivity for comparison to facility-collected data. The overall implementation of the quality assurance program by the Regional laboratory is addressed in the Quality Manual, and quality control is addressed in R7ENST Regional Laboratory Quality Control Policy.

A7.1 Precision and Accuracy

The goals for analytical precision and accuracy are described in R7ENST SOPs and specified in the analytical methods. If a contract laboratory is utilized, the contract laboratory will meet or exceed the goals for analytical precision and accuracy described in R7ENST SOPs and the analytical methods.

Spike sample data will be used to assess accuracy, matrix spike (MS) samples. Duplicate sample data will be utilized to assess precision, matrix spike duplicate (MSD) samples. Method specific criteria will apply. One MS/MSD sample should be collected for each group of twenty (20) field samples.

There will be no field measurements collected by the EPA during project activities. Field measurements and monitoring will be conducted by the facility or designee.

Prior to each sampling visit that will include VOC analysis, VOC trip blanks will be prepared by the R7ENST Laboratory in accordance with R7ENST SOPs. The VOC trip blanks will be transported to the site, kept with routine samples throughout the sampling event, packaged for shipment with routine samples, and sent with each shipping container with samples for VOC analysis to the laboratory. Analytical data from trip blank analyses will be utilized to determine the absence or presence of contamination during sample shipment.

No rinsate blank samples will be collected by the EPA, since decontamination will not be conducted by EPA personnel. Field blank samples will be collected in the field. These samples will be used to evaluate contamination that might occur from field conditions, including ambient air contaminant concentrations.

A7.2 Representativeness

Representativeness will be addressed by collecting, analyzing, and reporting the data as described in the EPA-approved General QAPP and QAPP Addendum. Split samples are intended to independently evaluate laboratory analysis. Split samples will be collected at the location designated in the QAPP Addendum at the same time as the facility sample, see Section B2.

A7.3 Completeness

The completeness of the project will be assessed by comparing the number of sample results to the number of samples submitted for analysis. The completeness goal is 100 percent. Should the completeness goal not be met, the EPA PM will determine if additional sample collection is needed.

A7.4. Comparability

Comparability will be addressed by collecting, analyzing, and reporting the data as described in the General QAPP and QAPP Addendum. The method(s) used by the R7 Lab, or contract laboratory, to analyze the split samples have been selected so that they are comparable to those used by the facility.

A8. SPECIAL TRAINING REQUIREMENTS/CERTIFICATION

No special training requirements or certifications are required for this project except for the 40-hour HAZWOPER class and annual refreshers.

A9. DOCUMENTATION AND RECORDS

This information is covered by R7ENST SOPs 2410.01, RLAB "Data Management Procedures" and 2410.10, "Analytical Data Submission Packages Contents and Review."

The project records collected under this General QAPP and Addendum are the ASR/SSR, chain of custody, field sheets, and data package provided by the laboratory. These records will be sent to the EPA R7 Regional Records Center. It is not anticipated that a field log or field record will be prepared beyond those required by the laboratory. The results of the sampling event will be incorporated into the final report prepared by the facility. It is the responsibility of the Records Information Manager at the RRC to maintain these records according to the records schedule.

The PM will disseminate copies of the General QAPP and QAPP Addendum to the people listed in the distribution list (see Section A3) once it is approved. Any revisions to the General QAPP will be numbered sequentially. It will be the responsibility of the PM to see that each person on the distribution list receives copies of any revisions.

B1. SAMPLING PROCESS DESIGN

Split samples will be collected as described in the QAPP Addendum.

B2. SAMPLING METHODS REQUIREMENTS

The Facility-prepared Work Plan/QAPP outlines the sample collection procedures. Sampling equipment utilized for the collection of samples will be provided by the facility. Corrective action of field sampling procedures and decontamination of the sampling equipment (if required) will be conducted by the facility.

The EPA Field Sampler will provide split sample containers to the facility to fill. Split samples will be collected at the location designated in the QAPP Addendum at the same time as the facility sample at that location.

For consistency, the facility representative will collect the field sample and split samples, if necessary rotating between the two until the full sample volume has been collected. For example, for a VOC groundwater sample, the facility will collect a field sample vial followed by an EPA split sample vial, followed by a field sample vial, followed by an EPA split sample vial until the total required volume has been collected (e.g., four 40-mL vials for the EPA VOC water sample for low detection limit). For soil/sludge/sediment, the facility will collect the field and split sample at the same location, side by side for VOC grab samples and from the same container used to mix the sample material for other analytical methods.

Any VOC water sample containers will be filled completely by the facility to ensure that there are no air bubbles present. In the event that air bubbles are present, the EPA Field Sampler will discard the sample and have the facility fill the bottle again.

The sample containers, preservation, and holding times for the samples to be collected during this project are described in R7ENST SOP 2420.06, "Sample Container Selection, Preservation, and Holding Times." Project specific samples, analytical methods, containers, holding times, and preservation are provided in the QAPP Addendum.

B3. SAMPLE HANDLING AND CUSTODY REQUIREMENTS

Chain-of-custody and field documentation will be in accordance with R7ENST SOPs 2420.04, "Field Chain of Custody for Environmental Samples" and 2420.05 "Identification, Documentation, and Tracking of Samples," respectively.

The laboratory will provide to the EPA Field Sampler chains of custody, custody seals, field sampling sheets, and sample labels (tags). Each of these shall be completed in its entirety and in accordance with the SOP. Note that sample labels should be completed with a ball point pen, as Sharpies ink can run when wet.

The laboratory will provide sample containers, sample preservative, a cooler or cooler(s) for transport; a large plastic bag to hold sample containers, filament tape, and clear tape. The clear

tape is used to protect labels from falling off and to secure the cooler/custody seal for transport. Wrap the clear tape around each sample container, thereby covering the label to keep the label from falling off.

Gloves should be used while handling samples and adding preservatives. Plastic bags should be used to hold ice for placement around the samples, under, sides and on top. Paper towels can be used to blot wet containers for labelling and transportation preparation. The laboratory does not routinely include gloves or plastic bags for this purpose. R7ENST SOP 2334.21 "Shipping ambient and NPDES Water Samples to the EPA Region 7 Laboratory," provides procedures to handle and transport both aqueous and solid (soil) samples to the R7ENST Laboratory. If the Field Sampler will be bringing the samples directly to the laboratory following sample collection, the cooler does not have to be taped closed and a custody seal is not necessary, as long as the Field Sampler keeps custody of the sample coolers during the entire time it takes to transport the samples from the field to the laboratory.

If water samples are to be analyzed for VOCs, place the required number of vials for one sample, i.e., three or four, into one cubitainer along with a charcoal thimble. Label each vial and the outside of the cubitainer with the sample label. For VOC containers, the clear tape must be one continual piece with tight fit, no wrinkles, as the sample containers are placed directly into the analytical equipment.

B4. ANALYTICAL METHODS REQUIREMENTS

The project specific samples, locations, media, and analytical methods are provided in the QAPP Addendum. The split sample data will be compared to analytical results generated by the facility to assess the accuracy and precision of the facility's data. Project results will be provided within the routine laboratory turnaround time.

B5. QUALITY CONTROL REQUIREMENTS

The R7ENST Laboratory will follow the Regional Laboratory Quality Control Policy as well as the QC requirements of each analytical method specified in the QAPP Addendum.

B5.1 Duplicate Samples

Matrix spike duplicate samples are collected at a frequency of one per twenty field samples and are specified in the QAPP Addendum.

B5.2 Trip Blank Samples

Prior to each sampling project with samples for VOC analysis, a VOC trip blank sample will be prepared by the R7ENST laboratory. This trip blank sample will be kept with the project sample

containers throughout the sampling event, packaged for shipment with the samples, and sent to the R7ENST Laboratory with the samples.

B5.3 Field Blank Samples

Field blanks are prepared in the field by filling sample containers with distilled, deionized water, provided by the laboratory. These samples differ from trip blanks in that they are completed for all analytical methods (not just VOCs) and the sample containers are opened, filled, and preserved while collecting split samples in the field, and consistent with the method requirements for container, volume, and preservative. One field blank should be collected for each sample event for each analytical method and as specified in the QAPP Addendum. These results will not be used to qualify split sample results, but will be used to determine if sampling conditions, including ambient air contaminant concentrations might have impacted split sample results.

B5.4 Matrix Spike/Matrix Spike Duplicates

A matrix spike/matrix spike duplicate (MS/MSD) will be analyzed for each analytical method, at a rate of one MS/MSD per twenty field samples. This may require collection of additional sample volume in the field, depending on the project analytical methods. For example, if the project includes collection of water samples for metals analysis, additional volume is not required for the MS/MSD as long as the sample container is filled to the top. If the project includes collection of water samples for VOC analysis, additional volume is required. In this case, two additional, complete sets of sample volume are required to be collected. Labels for MS/MSD sample containers are not marked as "MS/MSD", but are marked as the original sample number. The EPA PM must review the analytical method and volume requirements for MS/MSD analysis by method/media and determine where additional volume is required to allow for analysis of an MS/MSD sample per twenty field samples. MS/MSD samples required to be collected are specified in the QAPP Addendum.

B6. INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE REQUIREMENTS

No field equipment requiring testing, inspection, and maintenance will be used by the EPA or its designee. For the analytical instrumentation, the testing, inspection, and maintenance will be performed in accordance with the appropriate R7ENST analytical SOPs and manufacturer's recommendations.

B7. INSTRUMENT CALIBRATION AND FREQUENCY

No field equipment requiring calibration will be used for this project.

For the analytical instrumentation, the calibration will be performed in accordance with the

appropriate R7ENST analytical SOPs and manufacturer's recommendations.

B8. INSPECTION/ACCEPTANCE REQUIREMENTS FOR SUPPLIES AND CONSUMABLES

Sample containers for the split samples will be provided by the R7ENST Laboratory as identified in the QAPP Addendum. The EPA Field Sampler will inspect sample containers before use to ensure there are no physical flaws and/or deficiencies.

B9. DATA ACQUISITION REQUIREMENTS

Facility data will be generated as described in the EPA-approved Facility-prepared Work Plan/QAPP. The evaluation criteria between the data generated using this site-specific oversight QAPP and the facility data are specified in Section D3.

B10. DATA MANAGEMENT

Data management will be in accordance with R7ENST SOP 2410.1 "LAB Analytical Data Management Procedures." Split sample results will be provided to the facility for incorporation into the final project reports.

C1. ASSESSMENTS AND RESPONSE ACTIONS

Assessments and response concerning the analytical aspect of the project are addressed in the Laboratory's Quality Manual and R7ENST SOPs 2430.6, 2430.11, and 2430.14. The information covers examples of conditions indicating out-of-control situations, who is responsible for initiating the corrective actions, and what steps may be taken. Section D3 provides additional assessment and response actions to be taken by the EPA PM in response to the oversight sample collection process.

C2. REPORTING

Once the project is complete and the resulting data obtained, the EPA PM will prepare a project memo. The memo will include a summary of the activities performed during the project and the resulting data (along with any statements about problems concerning data quality). At a minimum, the report will be forwarded to the site file in the Regional Records Center to document decisions or actions taken; however, the report may also be forwarded to others, as appropriate, such as facility representatives, the EPA PM, supervisor, etc.

D1. DATA REVIEW, VALIDATION, AND VERIFICATION REQUIREMENTS

The analytical data will be peer-reviewed by a qualified analyst and the laboratory Section

Manager as identified in R7SOPs 2410.10 and analytical method requirements. The EPA PM will be responsible for overall validation and final approval of the data in accordance with the criterion identified in Section D3.

D2. VALIDATION AND VERIFICATION METHODS

The data will be validated in accordance with R7ENST SOP 2410.10 and the analytical method requirements.

The EPA PM will perform the final review and approval of the data prior to it being entered into the LIMS system as valid. This will consist of a comparison of the sample descriptions with the field sheets for consistency. Any anomalies in the data will be appropriately documented and communicated to the R7ENST laboratory. The EPA PM will also evaluate field quality control samples using the criterion contained in Section D3.

The analyses will be conducted using equivalent analytical procedures documented in the most current EPA Region7 SOPs.

D3. RECONCILIATION WITH USER REQUIREMENTS

Data verification is performed by the R7ENST Laboratory before data are transmitted to the EPA PM.

The split sampling event will provide data for the EPA PM to conduct an assessment of the laboratory data acquired from the facility. The assessment may be based on a statistical comparison between analytical laboratory data from the facility and the EPA, as specified in the *Guidance for Data Quality Assessment: Practical Methods for Data Analysis,* (QA/G-9, EPA/600/R-96/084, July 2000). Besides providing analytical data for comparison, split sampling allows the EPA PM to observe the sampling techniques to determine if there are any issues with field sampling procedures that might affect the accuracy or precision of analytical results. For example, the use of a bailer versus different pump types can affect the sample turbidity and resulting metals results. The method used to deliver the sample directly to the container can affect the accuracy of volatile organic results, if care is not taken to remove all head space etc. The ability of a split sample provides an overall measure of the accuracy and precision of facility results. If any issues are determined to exist by the EPA PM, these issues will be dealt with and corrected by the EPA PM in the course of the project.

Relative percent difference (RPD) will be used to measure precision between the EPA and facility data sets. For RPD comparison, split sample results will be evaluated for individual analytes as follows:

- Calculate RPD for each positive result using the following equation:

  - %RPD = [(E1 - FD1) X 100] / [(E1 + FD1) / 2]

    Where E1 = EPA result and FD1 = Facility Data result.

- Evaluate the precision for split sampling results according to the following:

  - For sample and duplicate results GREATER than five times the reporting limit, % RPD should be within ± 20 % for aqueous samples and ± 35 % for solid samples.

  - For sample or duplicate results LESS than five times the reporting limit, use five times the reporting limit as the criterion for agreement.

The EPA PM is responsible for evaluating the results of field quality control samples, including trip blanks and field blanks. Matrix spike/matrix spike duplicate (MS/MSD) sample results will be evaluated by R7ENST data verifiers; however, if issues are identified during the verification process, the EPA PM will be consulted regarding site-specific requirements/conditions, and the usability of the data will be flagged accordingly.

The resulting data set will be evaluated using positive detections in trip and field blanks as follows. For blanks, the following criteria apply:

- If a compound is detected in blank samples, but not in the associated site-specific samples, no action is taken.

- Any compound detected in the sample and also in the associated blank is qualified if the sample concentration is LESS than five times the amount found in the associated blank (or 10 times for common laboratory contaminants including acetone, methylene chloride, toluene, 2-butanone and chloroform). Sample qualification is performed as follows:
  - If the amount detected in the sample is less than five times the amount found in the associated blank (or 10 times for common laboratory contaminants), and the sample result is GREATER than the reporting limit, qualify the sample result as not detected (U).

  - If the amount detected in the sample is less than five times the amount found in the associated blank (or 10 times for common laboratory contaminants), and the sample result is LESS than the reporting limit, report the sample result as not detected (U) at the laboratory reporting limit.

- If a compound is detected in the blank sample, and in the associated site-specific sample, but at a concentration GREATER than five times the amount found in the associated blank, no action is taken.

QUALITY ASSURANCE PROJECT PLAN ADDENDUM
SPLIT SAMPLE OVERSIGHT

This document has been prepared in accordance with the *EPA Requirements for Quality Assurance Project Plans* (EPA QA/R-5, EPA/240/B-01/003, March 2001), for use by the U.S. Environmental Protection Agency (EPA), or its designated representatives in coordination with the General QAPP (Version 0.0).

I have reviewed the attached Quality Assurance Project Plan (QAPP) Addendum for the collection of split samples and find that the procedures outlined in this document combined with the General QAPP (Version 0.0) will result in data that meet the objectives for oversight split sample collection.

APPROVAL

Patricia Murrow — 8/30/17

Patricia Murrow, EPA Project Manager — Date

Diane Harris — 09/08/2017

Diane Harris, EPA Regional QA Manager — Date

Facility Name/Address	Wellman Dynamics Corporation 1746 Commerce Road Creston, Iowa 50801
RCRA ID No.	IAD065218737
Facility-prepared QAPP EPA-approval number	Sampling and Analysis Plan/Quality Assurance Project Plan Addendum, August 2017 EPA APPROVED NUMBER TBD 2017218
Facility-prepared Work Plan title and date	Sampling and Analysis Plan/Quality Assurance Project Plan Addendum, August 2017
EPA Project Manager/ext	Patricia Murrow, AWMD/WRAP/RCAP, ext 7627
Field Sampler	Patricia Murrow, AWMD/WRAP and Brad Hayworth, SEE in AWMD/WRAP
Primary site contaminants	Volatile Organic Compounds (VOCs) and Metals
Anticipated date(s) of split sampling event(s)	September 18, 2017
Required laboratory turn around time	30 days

Site Location/Sample Locations. See Attachment – Sheet 2 or 16, Water Table Map and Proposed Well Locations, RCRA Facility Investigation Workplan Addendum, Wellman Dynamics Corporation, Creston, Iowa, 9/15/15.

SPLIT SAMPLES TO BE COLLECTED

SAMPLE NUMBER	MATRIX/LOCATION	ANALYTICAL METHOD
Field Samples		
MW44-GW-09/17	Groundwater at Well 44	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW45-GW-09/17	Groundwater at Well 45	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW46-GW-09/17	Groundwater at Well 46	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW47-GW-09/17	Groundwater at Well 47	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW48-GW-09/17	Groundwater at Well 48	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW49-GW-09/17	Groundwater at Well 49	1,4-Dioxane in water using CLP SOW Method OLC03.2
MW48-GW-09/17 Duplicate 4FB	Groundwater at Well 48	1,4-Dioxane in water using CLP SOW Method OLC03.2

48/49 } 41° 2.971'N
94° 20.207'W

Quality Assurance/Quality Control Samples		
MW46-GW-09/17 2 (Justification for location of split sample - location of well to be sampled is downgradient of contaminated groundwater plume)	MS/MSD of Groundwater at Well 46	SVOCs (2 additional sample volumes at Well 46) Label with original sample number only. Designation as MS/MSD is done on field sheet

MS/MSD – Matrix Spike/Matrix Spike Duplicate
Check method and SOP 2420.06 "Sample Containers, Preservatives and Holding Times" for quality assurance/quality control sample collection requirements and summarize above.

METHOD/CONTAINERS/PRESERVATIVE/HOLDING TIMES

Method/matrix	Containers per sample	Preservative *	Holding times
1,4-Dioxane in water using CLP SOW Method OLC03.2	80 oz amber glass	Cool to 4 degrees C	7 days
QA/QC			
MS/MSD – 1,4-Dioxane in water using CLP SOW Method OLC03.2	MS/MSD need 80 oz amber glass	Cool to 4 degrees C	7 days

*check method and SOP 2420.06 "Sample Containers, Preservatives and Holding Times" for preservative requirements and summarize here. For example, for listed VOC water method, if samples contain sodium or potassium permanganate, ascorbic acid must also be added. Also, be sure to plan for QAQC samples. EPA laboratory may need additional sample volume for MS/MSD analysis.

Project screening levels are: EPA regional screening levels for tapwater.

BAM (PM Initial here) Initials indicate the EPA PM has verified that method detection limits are below project specific limits.

ATTACHMENTS:

Sheet 2 or 16, Water Table Map and Proposed Well Locations, RCRA Facility Investigation Workplan Addendum, Wellman Dynamics Corporation, Creston, Iowa, 9/15/15

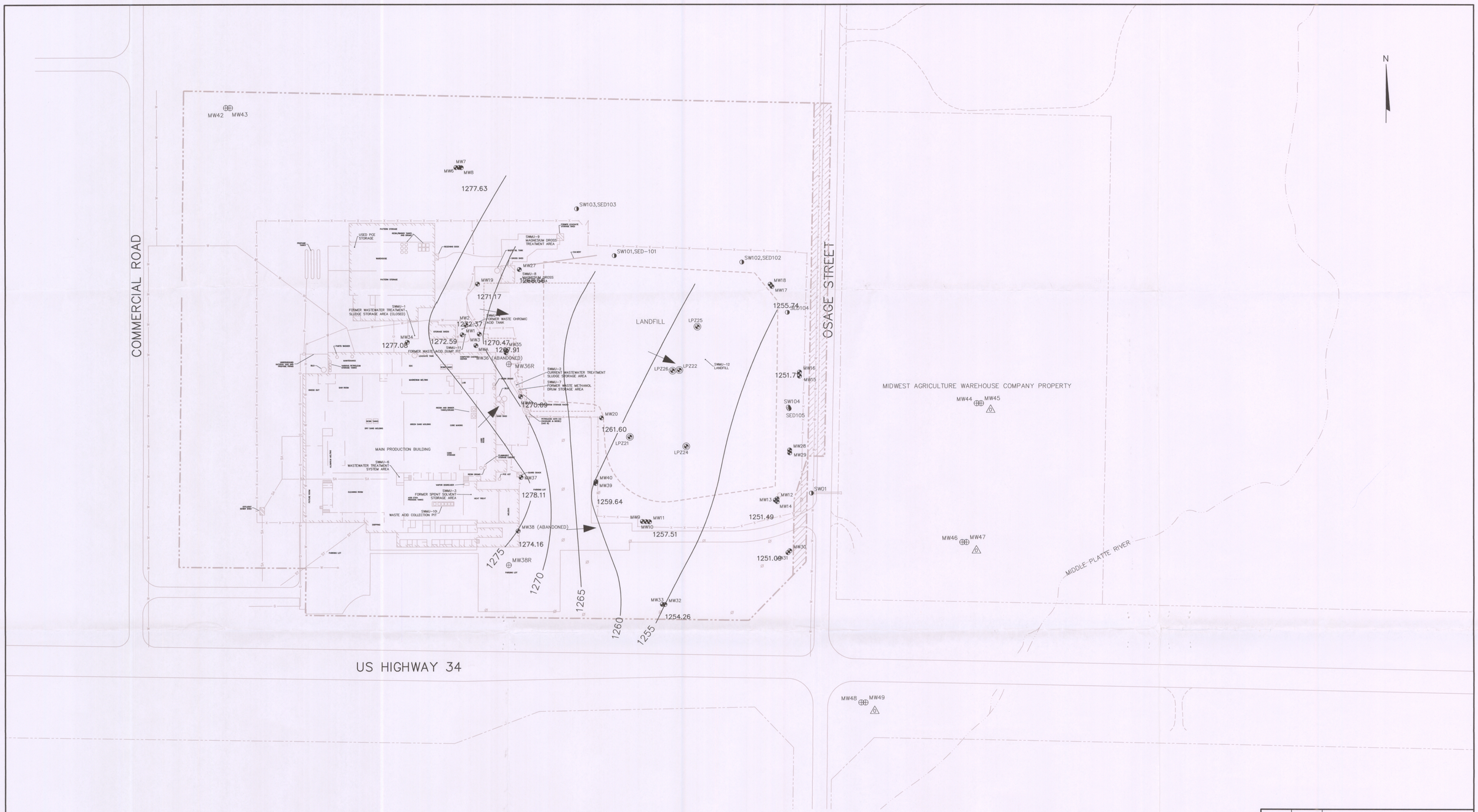
Method parameter list with detection/quantitation limits

Sampling Information Sheets (8/30/2017)

Sampling Supplies and QC/PE Samples, submitted on 8/30/2017

Analytical Service Request (ASR), submitted on 8/30/17

REFERENCES: CLP SOW OLC03.2, "Analysis of Low Concentration Organic."



LEGEND

PROPERTY LINE	GB123 — RFI GEOPROBE BORING (MAY 2007)
FENCE	WeE-B5 — 1998 GEOPROBE BORING
GAS MAIN	MW19 — GROUNDWATER MONITORING WELL
PROPANE PIPING	LPZ25 — LEACHATE PIEZOMETER
SANITARY SEWER	SW102 — SURFACE WATER OR SEDIMENT SAMPLE LOCATION
STORM SEWER	1251.49 — WATER TABLE ELEVATION MEASURED ON 03/11/08
WATER MAIN	WATER TABLE CONTOUR
UTILITY/LIGHT POLE	APPROXIMATE GROUNDWATER FLOW DIRECTION
LANDFILL LIMITS	MW44 — PROPOSED MONITORING WELL
RADIOLOGICAL AREA	

NOTES:

1. PROPOSED WELL LOCATIONS ARE APPROXIMATE AND WILL BE ADJUSTED BASED ON FIELD CONDITIONS.

REFERENCE:

1. BT2 INC. DRAWING, WATER TABLE MAP AND PROPOSED WELL LOCATIONS, DATED 06/20/08, REVISED 02/17/09.

100 0 100

SCALE: 1" = 100'

REVISION	DATE	DESCRIPTION
1	9/16/15	REVISED PROPOSED WELL LOCATIONS

SHEET 2 OF 16
WATER TABLE MAP AND PROPOSED WELL LOCATIONS
RCRA FACILITY INVESTIGATION WORKPLAN ADDENDUM
WELLMAN DYNAMICS CORPORATION
CRESTON, IOWA

Fansteel Wellman Dynamics

PREPARED FOR
WELLMAN DYNAMICS CORPORATION
1746 COMMERCE ROAD
CRESTON, IA 50801

APPROVED	RFV	9/16/15
CHECKED	RFV	9/16/15
DRAWN	DEB	9/16/15

DRAWING NUMBER

PA006636 WTBL-PENN-ER

Penn E&R
Environmental & Remediation, Inc.

S:\PROJECT FILES\4000-PA006636 Wellman 2015\RCRA Documents\WTBL-PENN-ER.dwg, MARCH08, 9/17/2015 9:02:24 AM, dbank

METHOD PARAMETER LIST WITH DETECTION/QUANTITION LIMITS

Contaminant	CAS No.	USEPA Region 9 Preliminary Remediation Goal for Tap Water (10-5, 0.1)	ANALYTICAL TEST METHOD
1,4-Dioxane	123-91-1	4.6 ug/l	1,4-Dioxane in water using CLP SOW Method OLC03.2

EPA Region 7 Laboratory Analysis Sampling Information

08/30/2017 10:03

Analysis Name: 1,4-Dioxane in Water by GC/MS SIM
Sample Tag Name: 14DioxaneSIM
Container(s): 1 80 oz amber glass
Preservative: 4 Deg C
Holding Time: 7 **Days**

Sampling Information:
Samples should be collected in 80 oz. (~2.4 Liter) amber jugs and stored at 4 deg. C. Sample collection and handling procedures should be similar to those used for semi-volatile and pesticide analyses.

EPA Region 7 Laboratory Analysis Information

08/30/2017 10:04

Analysis Name: 1,4-Dioxane in Water by GC/MS SIM

Sample Tag Name: 14DioxaneSIM
Matrix: Water
Parameter Class: Volatiles

Analysis Summary:
This analysis is for 1,4-dioxane in water using CLP SOW Method OLC03.2. This analysis is NOT performed by the EPA Region 7 lab, but samples from the Superfund program can be contracted out to a CLP lab.

Method: CLP SOW Method OLC03.2
Method Title: Analysis of Low Concentration Organic

Base Method(s)	Title
CLP SOW OLC03.2	Analysis of Low Concentration Organic

Capable Labs: CLP (Out-Source)

Sample Holding Time: 7 **Days**
Container Type: 80 oz amber glass
No. Of Containers: 1
Preservative: 4 Deg C
Weight Type: N/A
No.Of Tags: 1

Sampling Info:
Samples should be collected in 80 oz. (~2.4 Liter) amber jugs and stored at 4 deg. C. Sample collection and handling procedures should be similar to those used for semi-volatile and pesticide analyses.

Default Report Flag	Analyte Name	CAS Number	TRL	Units	RLAB NELAC Status
Con	1,4-Dioxane	123-91-1		ug/L	

Default Report Flag: Con Analyte that is not reported from in-house analysis and must be obtained through an out-source contract lab.

RLAB NELAC Status applies specifically to analyses performed in the Region 7 Laboratory. Analyses done by out-source contract labs may not have this certification.

EPA Region 7 Laboratory Analysis Analyte Information

08/30/2017 10:05

Analysis: 1,4-Dioxane in Water by GC/MS SIM
Matrix: Water
Method: CLP SOW Method OLC03.2

Default Report Flag	Analyte Name	CAS No	TRL	Units	RLAB NELAC Status
Con	1,4-Dioxane	123-91-1		ug/L	

Default Report Flag: Con Analyte that is not reported from in-house analysis and must be obtained through an out-source contract lab.

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Sampling Supplies and QC/PE Samples

08/30/2017 13:56

ASR Number: 7611 **Project ID:** PMWDCGW1

Project Desc: Wellman Dynamics Groundwater Investigation

Project Manager: Patricia Murrow
Organization: AWMD/RCAP **Phone Number:** 913-551-7627

Contact: Brad Hayworth
Organization: AWMD/WRPB **Contact Phone:** 913-551-7401

Supply Pickup Date: 09/14/2017 RLAB Will supply Field sheets and Tags

Supply Comments:
Field sheets, tags, ziplock bags (for ice and paperwork) and all noted below sampling supplies will be ready in 2 coolers near the new back dock refrig. at the STC for a pick-up on or after Thursday (9/14). PM/Field sampler can return any/all unused items (e.g. bottles & clear tape) back to the STC at sample delivery and be returned without any LIMS tags on them. No sampling supplies will be needed from the R7_warehouse for this ASR. Bubble-wrap for the 80oz amber bottles will not be needed since PM/sampler will be hand-delivering the coolers of samples with bagged ice cooling/securing the bottles.

Qty	Sample Containers
10	80-oz. Amber Glass Bottle (2.4 Liter)

Qty	Equipment
2	Ice Chest (w/ plastic bag)

Qty	Preservatives
(None)	

Qty	Misc. Supplies
2	Chain-of-Custody Forms (each)
1	Clear Wide Tape (by roll)

Qty	QC Samples
(None)	

Performance Evaluation Samples

Qty	Matrix	Analytes	Concentration Range
(None)			

US EPA Region 7 Analytical Services Request (ASR)

08/30/2017 13:59

Project ID: PMWDCGW1 **ASR Number:** 7611 **Projected Delivery Date:** 09/19/2017

Project Desc: Wellman Dynamics Groundwater Investigation

City: Creston **State:** Iowa **Program:** RCRA Enforcement
GPRA PRC: 303D99

Project Manager: Patricia Murrow
Organization: AWMD/RCAP **Phone Number:** 913-551-7627

Contact: Brad Hayworth
Organization: AWMD/WRPB **Contact Phone:** 913-551-7401

ASR Purpose: Site Characterization
Comments: Determine possible movement of contamination plume; validate analysis of facility's contract lab support on analyte of interest.

Sampling contact (BH) noted via phone on 8/30/17 that this ASR is not part of a litigation activity at this time.

Is this activity currently or potentially a criminal investigation? No
Has a QAPP for the requested services been approved? No
QAPP Log Number and/or QA Document Number:

For health, safety and environmental compliance are any samples expected to contain:

Dioxin > 1ppb: Unlikely
RCRA Listed Wastes: Unlikely
Toxic/Hazardous Chemicals >1000ppm: Unlikely

No. of Samples	Req No	Analysis Name	CNS List	Conc of Interest	Expected Conc	Lab
7	1	1,4-Dioxane in Water by GC/MS SIM	C	*See below		REST

Special Analytical Requirements or Comments:
30-Day TAT from the receipt of the last sample for this <30-Day advance notice ASR. PM noted that all samples will be hand-delivered in 1 batch on Tuesday (9/19) afternoon and need to be delivered before 4pm. If not delivered by 4pm, PM/Sampler can hold/kept cool (refrigerated) and deliver on (9/20) am. Any samples delivered on any Friday (e.g. 9/15) MUST be delivered by 11am. No weekend or holiday deliveries. PM/Sampler must ensure samples are delivered on or before the 2nd day of sample collection. PM/Field sampler must provide extra volume (triple amount) on 1 field sample for the LTAB QC=MS/MSD. LTAB will provide extra containers and sample tags for this purpose. PM/Sampler are both aware that all samples are to be collected, labeled and delivered per all of the Region 7 LTAB SOPs. *PM noted on the LIMS submitted ASR that the 1,4-Dioxane-SIM target concentration of analyte is 4.6 ug/L. The LTAB REST COR will be in contact with the EPA PM to discuss if there is an issue with the 1,4-Dioxane-SIM target analyte of 4.6ug/L. The above number of samples will include 1 field duplicate.

Date Submitted: 08/30/2017 **By:** Brad Hayworth **ASR Status:** Accepted
Date Accepted: 08/30/2017 **By:** Nicole Roblez **RLAB Turn Around Time:** 30 **Days**

Project Desc: Wellman Dynamics Groundwater Investigation

Date Transmitted: **By:** **ANOP Turn Around Time:** 23 **Days**